

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
16 June 2005 (16.06.2005)

PCT

(10) International Publication Number
WO 2005/054809 A2

- (51) International Patent Classification⁷: **G01N**
- (21) International Application Number:
PCT/US2004/038530
- (22) International Filing Date:
17 November 2004 (17.11.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/525,565 25 November 2003 (25.11.2003) US

(71) Applicant (for all designated States except US): **ARIZONA BOARD OF REGENTS**, a body corporate of the State of Arizona, acting for and on behalf of **ARIZONA STATE UNIVERSITY** [US/US]; Brickyard Suite 601, Room 691AA, 699 S. Mill Avenue, Tempe, Arizona 85281 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **PETTIT, George, R.** [US/US]; 6232 Bret Hills Drive, Paradise Valley, Arizona 85253 (US). **XU, Jun-Ping** [CN/US]; 3281 W. Ross Drive, Chandler, Arizona 85226 (US).

(74) Agent: **ROSENFELD, Susan Stone; FENNEMORE CRAIG, P.C.**, 3003 North Central Avenue, Suite 2600, Phoenix, Arizona 85012-2913 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

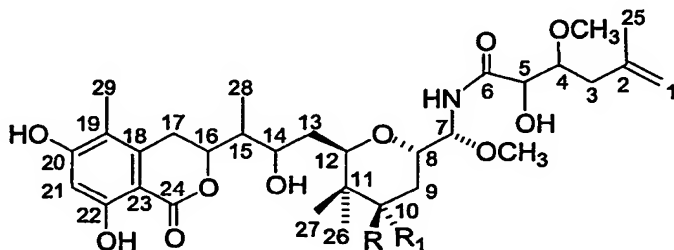
— of inventorship (Rule 4.17(iv)) for US only

Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **IRCINIASTATINS A AND B**



1, R = OH, R₁ = H, Irciniastatin A

2, R, R₁ = O, Irciniastatin B

(57) Abstract: The Indo-Pacific marine sponge *Ircinia ramosa* has been found to contain two powerful (GI₅₀ 0.001 to <0.0001 µg/ml) murine and human cancer cell growth inhibitors, denominated herein as irciniastatin A and irciniastatin B. Both were isolated (10-3 to 10-4 % yields) by cancer cell line bioassay-guided techniques and named irciniastatins A (1) and B (2). Structural elucidation by a combination of spectral analyses, primarily high resolution mass and 2D-NMR (principally APT, HMQC, HMBC and ROESY) revealed unusual structures 1 and 2.